

ABSTRACT

A slide drive device for a press drives a slide without employing a horizontal slide guide mechanism. Connecting rods move in a linear-type motion level with a balanced crank shaft to minimize vibration. A dynamic balance mechanism further reduces vibration and a slide height adjustment mechanism enables simple top and bottom dead center slide adjustment from a central location. The connecting rods transmit force from the crank shaft to upper links, and through middle and lower links to the slide. A fixed fulcrum pin on the upper link is vertically aligned with a slider pin on the middle link. A center fulcrum pin connects the upper and middle links at a fixed relationship. The slide drive device provides a lower slide speed for increased force adjacent the bottom dead center position and higher slide speed adjacent the top dead center position for speedier return.